

**Claims**

1. Current measurement apparatus comprising a Rogowski coil wherein the Rogowski coil comprises a wire which is  
5 insulated prior to forming the Rogowski coil.
2. Current measurement apparatus according to claim 1 in which the wire is insulated for safety purposes.
- 10 3. Current measurement apparatus according to claim 1 or claim 2 in which the wire is insulated by insulating material.
4. Current measurement apparatus according to claim 3 in  
15 which the insulating material is resistant to physical damage.
5. Current measurement apparatus according to claim 3 or claim 4.
- 20 6. Current measurement apparatus according to any preceding claim the complete outer surface of the wire is coated with an insulating material
- 25 7. Current measurement apparatus according to claim 6 in which the complete outer surface of the wire is coated with an insulating material which provides reinforced insulation.
- 30 8. Current measurement apparatus according to claim 3 or any claim dependent upon claim 3 in which the insulating material comprises a wrapping for the wire.

9. Current measurement apparatus according to claim 3 or any claim dependent upon claim 3 in which the insulating material an extrusion for the wire.
- 5 10. Current measurement apparatus according to any preceding claim in which the Rogowski coil comprises a single insulated wire which provides a central conductor and a coil.
- 10 11. Current measurement apparatus according to any preceding claim in which the insulation coating is less than or equal to 0.125mm.
- 15 12. Current measurement apparatus according to any preceding claim in which the Rogowski coil is formed by providing a straight central conductor section and winding a coil around at least a part of the straight electrical conductor section.
- 20 13. Current measurement apparatus according to any preceding claim in which the Rogowski coil comprises an inner sheath.
- 25 14. Current measurement apparatus according to any preceding claim in which the wire comprises copper wire.
15. Current measurement apparatus according to any preceding claim in which the Rogowski coil comprises an end wherein the end does not require an insulation cap.

16. Current measurement apparatus according to any preceding claim in which the wire comprises a plurality of layers of insulating material.
- 5 17. Current measurement apparatus according to any preceding claim in which the Rogowski coil comprises a first end and a second end.
- 10 18. Current measurement apparatus according to claim 17 in which, in use, the first end is arranged, in use, to locate adjacent to the second end.
- 15 19. Current measurement apparatus according to claim 18 in which, a first end member located on the first end is arranged, in use, to engage a second end member located on the second end.
- 20 20. Current measurement apparatus according to any preceding claim in which a first end member located on one end of the Rogowski coil is arranged, in use, to cooperate with a second end member located on a second end of the Rogowski coil.
- 25 21. Current measurement apparatus according to any preceding claim in which, in use, a first end of the Rogowski coil is arranged, in use, to cooperate with a second end member located on a second end of the Rogowski coil in order to form a contiguous loop.
- 30 22. Current measurement apparatus according to any preceding claim in which a first end of the Rogowski coil is arranged to magnetically cooperate with a second end of the Rogowski coil.

23. Current measurement apparatus according to any one of  
claims 19 to 22 in which the first end member comprises a  
female member and the second end member comprises a male  
5 member.

24. Current measurement apparatus according to any one of  
claims 19 to 23 in which the first end member is arranged,  
in use, to be secured to the second end member solely by  
10 magnetic force.

25. A method of forming current measurement apparatus  
comprising forming a Rogowski coil from an insulated wire.

15 26. A method according to claim 25 in which the method  
comprises forming a central conductor section and forming  
a coil around the central conductor section using  
insulated wire.

20 27. A method of measuring current comprising using current  
measurement apparatus in accordance with any one of claims  
1 to 25.

25 28. A method of measuring current comprising using current  
measurement apparatus formed in accordance with claim 27.

29. Current measurement apparatus substantially as herein  
described with reference to, and as shown in, any of the  
accompanying drawings.

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30. A method of forming current measurement apparatus  
substantially as herein described with reference to, and  
as shown in, any of the accompanying drawings.

31. A method of measuring current substantially as herein described with reference to, and as shown in, any of the accompanying drawings.